

WHAT IS CLAIMED IS:

5 1. A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:  
a processor; and  
a memory unit;

10 wherein, when a download of data or programming is offered to said set-top terminal over said cable network, said processor only accepts said download and records said download in said memory unit when one or more predetermined criteria are satisfied, said  
15 criteria tending to indicate that acceptance of said download will cause a minimum of interfere with said subscriber's use of said set-top terminal.

20 2. The terminal of claim 1, wherein said one or more criteria are downloaded to said set-top terminal over said computer network.

25 3. The terminal of claim 1, wherein said set-top terminal verifies that said data or programming offered as said download is not already resident in said memory.

30 4. The terminal of claim 1, wherein said set-top terminal verifies that said data or programming offered as said download is specified as being intended for a class of terminals to which said set-top terminal belongs.

5. The terminal of claim 1, wherein said one or more criteria include a time of day.

6. The terminal of claim 1, wherein said one or more criteria include whether said set-top terminal is turned off.

5 7. The terminal of claim 1, wherein said one or more criteria include a deadline by which acceptance of said download is required by an operator of said cable network.

10 8. The terminal of claim 7, wherein said set-top terminal defers said deadline if said set-top terminal is being used to provide a dedicated service including recording programming in conjunction with a VCR or providing pay-per-view programming.

15 9. The terminal of claim 1, wherein said set-top terminal signals said subscriber that said download is available and requests permission to accept said download, said one or more criteria including a  
20 positive response by said subscriber to said request for permission to accept said download.

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~~25 10. The terminal of claim 1, wherein said set-top terminal tunes to a specified channel to receive said download if said one or more criteria are satisfied.~~

30 11. The terminal of claim 1, wherein if said one or more criteria are satisfied, said processor erases information in said memory unit and replaces said erased information with data or programming from said download.

12. The terminal of claim 1, wherein following said download of programming, said processor will only

execute newly-received programming from said download when one or more predetermined criteria are satisfied.

5 13. The terminal of claim 1, wherein, prior to accepting said download, said processor determines whether any programming is stored in said memory which is not being executed, but which is identified as being a later version than programming being executed by said processor at that time; if said processor locates any  
10 such later version of programming in memory, said processor will terminate execution of the programming being executed, erase said terminated programming from memory and reset so as to execute said later version of said programming.

15 14. The terminal of claim 1, wherein, when said one or more criteria for accepting said download have been satisfied, said processor will erase from said memory any older, non-executing version of said  
20 programming already resident in memory and replace said erased programming with new programming from said download.

25 15. The terminal of claim 1, wherein said memory unit is logically partitioned into two sections, a first section for containing programming being executed by said processor and a second section for receiving and storing programming from said download.

30 16. ~~The terminal of claim 1, wherein each download of programming contains two versions of a programming object, a first programming object for storage in and execution from said first memory section and a second programming object for storage in and execution from~~

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said second memory section, wherein said processor downloads one of said two versions of programming in accordance with whether said first or second memory section is vacant.

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17. The terminal of claim 1, wherein said memory unit comprises two separate memory devices, a first memory device for containing programming being executed by said processor and a second memory device for receiving and storing programming from said download.

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18. A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:

a processor; and

a memory unit;

wherein, said set-top terminal occasionally receives a download over said cable network of new programming; and

wherein following said download of programming, said processor will only execute said new programming from said download when one or more predetermined criteria are satisfied.

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19. The terminal of claim 18, wherein said one or more criteria include whether said set-top terminal is turned off.

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20. The terminal of claim 18, wherein said one or more criteria include detection of a commercial break in television programming being received by said set-top terminal.

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21. The terminal of claim 18, wherein said one or more criteria include a deadline by which

implementation of said new programming is required by an operator of said cable network.

5 22. The terminal of claim 21, wherein said set-top terminal defers said deadline if said set-top terminal is being used to provide a dedicated service including recording programming in conjunction with a VCR or providing pay-per-view programming.

10 23. The terminal of claim 18, wherein said set-top terminal signals said subscriber that new programming has been received and is ready for execution and requests permission to execute said new programming, said one or more criteria including a positive response  
15 by said subscriber to said request for permission to execute said new programming.

20 24. A method for minimizing interruptions to use of a set-top terminal that connects a subscriber to a cable network where said interruptions result from downloading data or programming to said set-top terminal over said cable network, the method comprising accepting said download only when one or more  
25 predetermined criteria are satisfied, said criteria tending to indicate that acceptance of said download will not interfere with said subscriber's use of said set-top terminal.

30 25. The method of claim 24, further comprising downloading said one or more criteria to said set-top terminal over said computer network.

26. The method of claim 24, further comprising verifying that said data or programming offered as said

download is not already resident in said set-top terminal.

5 27. The method of claim 24, wherein said method further comprising verifying whether said one or more predetermined criteria are satisfied.

10 28. The method of claim 27, wherein said verifying comprises comparing a time of day against a predetermined acceptable time of day for accepting a download.

15 29. The method of claim 27, wherein said verifying comprises determining whether said set-top terminal is turned off.

20 30. The method of claim 24, further comprising signaling said subscriber that said download is available and requesting permission to accept said download, wherein said one or more criteria include receiving a positive response by said subscriber to said request for permission to accept said download.

25 31. The method of claim 24, further comprising, subsequent to said download of programming, executing newly-received programming from said download only when one or more predetermined criteria are satisfied.

30 32. The method of claim 24, wherein, prior to accepting said download, said method comprises:

determining whether any programming is stored in said memory which is not being executed, but which is identified as being a later version than programming running on said set-top terminal at that time; and,

if any such later version of programming is located in memory, terminating execution of the programming being executed, erasing said terminated programming from memory and resetting said set-top terminal so as to execute said later version of said programming.

33. The method of claim 24, wherein, when said one or more criteria for accepting said download have been satisfied, said method further comprises erasing from said memory any older, non-executing version of said programming already resident in memory and replace said erased programming with new programming from said download.

34. The method of claim 24, further comprising partitioning said memory unit into two sections, a first section for containing programming being executed by said processor and a second section for receiving and storing programming from said download.

35. The method of claim 34, wherein each download of programming contains two versions of a programming object, a first programming object for storage in and execution from said first memory section and a second programming object for storage in and execution from said second memory section, wherein said method further comprises selectively downloading one of said two versions of programming in accordance with whether said first or second memory section is vacant.

36. A method for implementing upgraded programming received in a set-top terminal for connecting a subscriber to a cable network, said method comprising terminating execution of existing programming and

commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied.

5. 37. The method of claim 36, wherein said one or more criteria include whether said set-top terminal is turned off.

10 38. The method of claim 36, wherein said one or more criteria include detection of a commercial break in television programming being received by said set-top terminal.

15 39. The method of claim 36, wherein said one or more criteria include a deadline by which implementation of said new programming is required by an operator of said cable network.

20 40. The method of claim 39, further comprising deferring said deadline if said set-top terminal is being used to provide a dedicated service including recording programming in conjunction with a VCR or providing pay-per-view programming.

25 *Sub D1* 41. A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:  
a processor unit comprising a first processor and a second processor; and  
a memory unit;  
30 wherein, said first processor is dedicated to providing a user interface and said second processor is dedicated to managing a download of data or programming offered to said set-top terminal over said cable network, such that said first processor can maintain



said user interface including user services while said  
second processor manages a download.

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